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**EXHIBIT 15**

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF MASSACHUSETTS

SKYLINE SOFTWARE SYSTEMS, INC.,

Plaintiff,

CIVIL ACTION NO. 04-11129 DPW

v.

KEYHOLE, INC., and  
GOOGLE INC.

Defendants.

**DEFENDANTS' RESPONSIVE CLAIM CONSTRUCTION BRIEF**

**LEAVE TO FILE GRANTED**

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opinion of Dr. Feiner as to how they would be understood from the standpoint of one of ordinary skill in the art, are attached as Exhibits 2 and 3 to the Woo Declaration, incorporated by reference, and explained below. Because the patent is about storing, requesting and retrieving "data blocks," we start out with that claim term.

**"data block"**

Like several other terms, the term "data block"<sup>4</sup> is used consistently throughout the claims and should therefore be given the same construction throughout. *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342 (Fed. Cir. 2001) ("a claim term should be construed consistently with its appearance in other places in the same claim or in other claims of the same patent").

Generally a "data block" is data that is processed as a single unit, but Skyline has chosen to be its own lexicographer with respect to this claim term. See, e.g., *Vanderlande Indus.*, 366 F.3d at 1318. The specification indicates that a "data block" as used in the patent is not simply a data block according to the term's plain and ordinary meaning, but that it specifically means "an image of a terrain area that is composed of pixels, where each data block optionally also contains data associated with the image of the terrain area, such as data describing other objects that overlay the terrain; each data block has one particular resolution." Declaration of Professor Steven K. Feiner, Ph.D. in Support of Defendants' Responsive Claim Construction Brief ("Feiner Decl.") ¶ 13. See, e.g., '189 patent, col. 8:15-9:39; Figs. 2 & 3. This is how this term would be understood by one of ordinary skill in the art in light of the patent specification. Feiner Decl. ¶ 13.

The specification, e.g., '189 Patent col. 8:15-9:39; Figs. 2 & 3, gives a detailed description of the structure of the "data block" of the invention, specifically referring to the data blocks as "images of terrain" in which the image blocks are subdivided into sub-blocks. '189

<sup>4</sup> Some of the dependent claims refer simply to "blocks" but they are clearly referring to data blocks and should therefore be given the identical construction. Feiner Decl. ¶ 15.

broad definition of “data block” is thus neither supported by the evidence, nor the “plain and ordinary” definition Skyline claims it is.

Additionally, Skyline states that data blocks “may consist solely of elevation data. *Id.*, col. 5, lns. 37-38.” Skyline Brief at 10. However, the cited portion of the specification states “Preferably, transferring the data blocks includes transferring blocks which include altitude data of the terrain.” This does not mean that blocks could “consist solely of elevation data” but rather that some blocks may include elevation data. Feiner Decl. ¶ 17.

**“terrain”**

The term “terrain” is also used consistently throughout the claims and should therefore be given the same construction throughout. Unlike “data block,” there is no indication anywhere in the patent specification that the patentee intended to impart a special meaning to the term “terrain.” Feiner Decl. ¶ 18. Consequently, the term’s plain and ordinary meaning should control. *See Tex. Digital*, 308 F.3d 1193 at 12042.

The plain and ordinary meaning of “terrain” is “the surface features of an area of land; topography.” *See THE AMERICAN HERITAGE COLLEGE DICTIONARY* 1400 (3<sup>rd</sup> ed. 1997), attached as Exhibit B to the Feiner Declaration. The specification supports this understanding of the plain and ordinary meaning of “terrain.” The specification makes liberal use of the term in describing aspects of the prior art and in explaining the patented invention. *See, e.g.*, ‘189 patent col. 1:25, 41, 44, 52; col. 2:13, 27; col. 3:5; col. 4:15; col. 5:38, 41, 53, 59; col. 6:55; 8:20. Nowhere in the patent, however, does the patentee provide a specialized meaning for the term “terrain,” nor does the context of the specification in whole or in part supply any such meaning.

Notwithstanding the lack of any supporting evidence, Skyline now argues in its brief that the ‘189 patent *does* impart a specialized meaning for “terrain,” and that “terrain” should therefore be construed to include “other features, such as color attributes and objects.” Skyline Brief at 12. Skyline cites various portions of the specification that, again, simply do not support

“terrain” in the specialized sense that Skyline advocates here. According to the ‘189 patent, for example, “[c]omputer rendering of three-dimensional *terrain* images is known in the art.” ‘189 patent, col. 1:41-42 (emphasis added). The specification also refers to U.S. Patent No. 4,940,972 as one prior art reference that displays an “image of the ground *terrain*.” *See* ‘189 patent, col. 1:42-45 (emphasis added). The specification also mentions U.S. Patent No. 5,566,073, which “suggests representing the *terrain* as polygons.” ‘189 patent, col. 1:45-52 (emphasis added). Because use of the term “terrain” must be consistent throughout the patent, Skyline cannot be using “terrain” to mean something different when speaking of the prior art and yet something else when speaking of the claimed invention, where there is no indication of any such distinction in the specification. *See, e.g., Budde v. Harley-Davidson, Inc.*, 250 F.3d 1369, 1379-80 (Fed. Cir. 2001) (“In construing terms used in patent claims, it is necessary to consider the specification as a whole, and to read all portions of the written description, if possible, in a manner that renders the patent internally consistent.”); *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342 (Fed. Cir. 2001) (“a claim term should be construed consistently with its appearance in other places in the same claim or in other claims of the same patent”). The specification’s descriptions of prior art are consistent with the plain and ordinary meaning of “terrain,” but not with Skyline’s manufactured definition. Skyline’s construction should be rejected.

#### “renderer”

In the specification and every single claim of the ‘189 patent, the “renderer,” which generates images, is clearly stated to have certain specific additional core properties: it must provide to another object coordinates in the terrain along with an indication of a respective resolution level and it must receive data blocks from another object. Feiner Decl. ¶ 21. Accordingly, the Court must look to the specification to identify the meaning of this claim term. *See Vanderlande*, 366 F.3d at 1318; *see also Irdet Access*, 383 F.3d at 1303. When referring to the written description to identify a term’s special meaning, the term may be construed “only as

**"data blocks belonging to a hierarchical structure"**

This phrase, as used in the patent, would be understood by one of ordinary skill in the art to mean "data blocks that are organized into multiple levels of resolution, whereby each level contains data blocks at the same resolution, and each successive level contains data blocks of a higher resolution than those in the preceding level." Feiner Decl. ¶ 30.

Defendants' construction having each successive level at a higher resolution than the preceding level is consistent with the specification, and with how "hierarchies" are arranged generally. Feiner Decl. ¶ 31. The specification provides a thorough explanation of how the data blocks of the invention are to be arranged in a hierarchy. *See, e.g., '189 patent, col. 3:3-12; 8:61-9:21; col. 14:28-46; Figs. 2, 3, 9.* "Blocks 42 are classified in *successive resolution levels* ... according to ... the level of detail which they include." '189 patent, col. 8:61-64 (emphasis added). Figure 2 shows four successive levels of data blocks. Level 1, the lowest level, covers the largest area per block and has the least detail per area unit. '189 patent, col. 8:64-67; Feiner Decl. ¶ 31. Each block of the next level, level 2, is of higher resolution and cover only one fourth of the area of level 1 blocks. Feiner Decl. ¶ 31. In other words, for each block of level 1, there are four blocks in level 2 of higher resolution that together cover the same area. '189 patent, col. 9:7-13; Feiner Decl. ¶ 31. Thus, the blocks in level 4 are of a higher resolution than those in level 3, which in turn are higher than those in Level 2, etc. (Resolution level: Level 4 > Level 3 > Level 2 > Level 1). Feiner Decl. ¶ 31. The specification further clarifies:

In a similar manner, each successive level 44 comprises blocks 42 which cover a quarter of the area of the blocks 42 of the lower resolution level.

Four blocks 55 of a certain level 44C, which cover the same area as a block 57 of the preceding level 44B, are referred to as descendants of block 57. Conversely, block 57 is referred to herein as the parent of blocks 55. The parent block 59 of block 57 is referred to herein as an "ancestor" of blocks 55, and is said to be of a lower resolution level than its descendants.

'189 patent, col. 9:10-21.

“different” is unsupportable and simply wrong. *See* Feiner Decl. ¶ 33. In fact, Skyline’s construction would effectively read out the term “hierarchy” from the language of the claim. Feiner Decl. ¶ 33.

By way of analogy, consider the hierarchy of military rank. Under Skyline’s construction, there need be no top level of command, with successively lower levels beneath. Instead, each level would only need to be “different,” such that generals could issue orders to privates, but would likewise be obligated to take orders from privates. In fact, generals would be required to take orders from *all* other levels in Skyline’s hierarchy of command except other generals (who would be at the same, rather than at a “different” level). Such a scheme does not describe a hierarchy, but anarchy.

Skyline then argues that Defendants’ proposal is incorrect because “the hierarchical structure could equally be described as containing data blocks of *lower* resolution than those in the preceding level.” Skyline Brief at 12. All that Skyline has pointed out, however, is that a hierarchy can be viewed from the top down or from the bottom up. Feiner Decl. ¶ 34. This does not make Defendants’ construction “wrong.” Feiner Decl. ¶ 34. Indeed, Defendants have chosen one viewpoint (successively higher) over the other (successively lower) simply because the claim language describes it that way. *See, e.g.*, ‘189 patent, claim 1 (“data blocks at a *resolution level higher* than the resolution level of the first block”) (emphasis added). Thus, the patent claims themselves make clear that the “successively higher” viewpoint is the one of the two possible viewpoints that is the contextually correct one.

#### “coordinates in the terrain”

This phrase, as used in the patent, would be understood by one of ordinary skill in the art to mean “a pair of numerical coordinates, such as latitude and longitude or x and y coordinates, of a particular location in the terrain.” Feiner Decl. ¶ 35; ‘189 patent col. 4:15-18. The plain language of the claim itself supports Defendants’ construction, as it states clearly that the

objects that overlay the terrain.” Feiner Decl. ¶ 46. Additionally, the phrase refers to “*the* one or more coordinates.” Feiner Decl. ¶ 46. The presence of “*the*” denotes a particular antecedent reference. “[T]he one or more coordinates” in this phrase from the claim is thus referring to the “one or more coordinates in the terrain” received from the renderer, as explained above. Feiner Decl. ¶ 46.

The construction also finds support in the specification. *See, e.g.*, ‘189 patent, col. 4:10-18; col. 6:1-5; col. 8:38-42; Feiner Decl. ¶ 47.

**“local memory”**

This term, as used in the patent, would be understood by one of ordinary skill in the art to mean “a memory that is part of the local computer that is performing the steps of the recited method.” Feiner Decl. ¶ 48.

The specification likewise makes clear that the local memory is part of the apparatus that is performing the method steps. Feiner Decl. ¶ 49; *see also* ‘189 patent, col. 3:25-27 (“the processor manages a local cache memory.... [T]he processor stores in the cache memory all blocks downloaded from the server.”). “[T]he apparatus include[s] a local memory.... [T]he memory receives the data blocks from a remote server.” ‘189 patent, col. 5:62-66; *see also* ‘189 patent, col. 15:50-51 (“all the received blocks are stored in cache memory 32 for later use”). The local memory that stores the data blocks once they have been downloaded is described as the “cache memory 32 of processor 20, for example in the main memory of processor.” ‘189 patent, col. 11:40-42, 58-61.

Skyline’s proposed construction (that local memory is “memory of a local computer”) is circular and offers no assistance to the trier of fact in determining the meaning or scope of the claim language. It is also contradicted by the plain and ordinary meaning as defined by Skyline, and the understanding of one of ordinary skill in the art. Feiner Decl. ¶ 50.

Skyline argues that its definition is drawn from the plain and ordinary meaning, and cites

the MICROSOFT COMPUTER DICTIONARY to support its argument. Skyline Brief at 17. However, the MICROSOFT COMPUTER DICTIONARY directly contradicts Skyline's proposed definition. The dictionary defines local memory as "[i]n microprocessor systems, *the memory on the same card or high speed bus as a particular processor*. Typically, memory that is local to one processor cannot be accessed by another without some form of permission." *Id.* (quoting MICROSOFT COMPUTER DICTIONARY 272 (4<sup>th</sup> ed. 1999) (emphasis added)). This definition plainly states that the memory is part of the same card or bus as the processor. This definition clearly suggests that the memory is part of the same unit as the processor. Skyline relegates this full definition to a footnote, presumably because it directly contradicts their proposed construction, and instead quotes a phrase from the declarative sentence that follows that does not actually provide a definition, but merely describes the typical access permissions to a processor's memory. Skyline Brief at 17 & n.8.

Additionally, "local memory" has a well-understood meaning to one of ordinary skill in the art: that the memory is part of the local computer. Feiner Decl. ¶ 50.

Finally, Skyline misrepresents Defendants' position in one of its arguments. In attempting to critique Defendants' arguments, it states that a local memory "need not physically form part of the processor." Skyline Brief at 18. Defendants, however, never suggested that the local memory must be physically part of the *processor*, only that it be physically part of the *computer*.

#### "first data block"

Defendants hereby incorporate their construction and arguments for the term "data block." *See supra.* Defendants vigorously disagree with Skyline's proposed construction, contrary to the assertion Skyline makes in its opening brief. Skyline's proposed construction is wholly unsupported in the specification, and reads out language from the claim, and should therefore be rejected.

**CONCLUSION**

For the foregoing reasons, the Court should adopt Defendants' proposed constructions as outlined in Exhibits 2 and 3 to the Woo Declaration.

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Respectfully submitted,

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